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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,152	07/24/2003	Young Il Park	CU-3309 RJS	9707
26530	7590	07/11/2006	EXAMINER	
LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604			BRIGGS, NATHANAEL R	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,152	PARK ET AL.	
	Examiner	Art Unit	
	Nathanael Briggs	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claims 4-5, 8, and 10 are objected to because of the following informalities:
Reference to "a horizontal line" is ambiguous. Examiner interprets "a horizontal line" to refer to the orientation direction of the lower orientation film. Any change in the orientation direction of the lower orientation film ($0^{\circ}\sim 10^{\circ}$, see claims 4 and 10) will then be added to the quantity in reference "to a horizontal line" (see claims 5, 8, and 10).
Appropriate correction is required.
3. Claim 10 is objected to because of the following informalities: The quantity -
 $50\sim 31\ 54^{\circ}$ is a typographical error. It should read $-50\sim -54^{\circ}$. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by

Okamoto et al. (US 6,791,640).

6. Regarding claims 1, 4-8, and 10, Okamoto discloses a reflective LCD (see figures 1 and 26) having: a lower substrate (5) including a reflective electrode (7); a lower orientation film (3) formed on the reflective electrode (7) with an orientation direction having a range of 0° ~ 10° ; an upper substrate (4) opposed to the lower substrate (5), being made of transparent substrate (8) capable of compensating a phase of $\lambda/4$ (column 15, lines 4-14) with an optical axis of a predetermined angle; an upper orientation film (2) formed on the upper substrate (4), having an orientation angle of -50° ~ 54° with respect to the orientation direction of the lower substrate (14,15); a twisted nematic liquid crystal layer (1, column 6, line 25) interposed between the lower substrate (5) and the upper substrate (4), with a predetermined phase delay value ($d\Delta n$) of 0.15 ~ $0.17 \mu\text{m}$ (column 6, lines 41-45), having a twist angle of 50° ~ 60° with respect to the left direction (column 6, lines 45-47); and a polarizing plate (10) attached to an outer surface of the upper substrate (4) not opposed to the lower substrate (5), having a predetermined polarizing axis with an angle of 112° ~ 120° with respect to the orientation direction of the lower substrate (TWIST ANGLE, θ_3 ; column 7, lines 46-49). Claims 1, 4-8, and 10 are therefore unpatentable.

7. Regarding claims 2 and 11, Okamoto discloses the reflective LCD of claims 1 and 10 (see figures 1 and 26, for instance), wherein the transparent substrate capable

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of compensating the phase of $\lambda/4$ (8) is a glass substrate for completely circular-polarizing light of 550 nm wavelength (100; column 6, lines 27-41; column 15, lines 1-14). Claims 2 and 11 are therefore unpatentable.

8. Regarding claim 3, Okamoto discloses the reflective LCD of claim 1 (see figures 1 and 26, for instance), wherein the transparent substrate capable of compensating the phase of $\lambda/4$ (100) is a glass substrate for changing a phase of light of 550 nm wavelength $\lambda/2$ (column 15, lines 4-9). Claim 3 is therefore unpatentable.

9. Regarding claim 12, Okamoto discloses the reflective LCD of claim 10 (see figures 1 and 26, for instance), wherein the transparent substrate capable of compensating the phase of $\lambda/4$ (100) is a glass substrate for changing a phase of light of 550 nm wavelength into $\lambda/4$ (column 15, lines 9-14). Claim 12 is therefore unpatentable.

10. Regarding claims 9 and 13, Okamoto discloses the reflective LCD of claims 1 and 10 (see figures 1 and 26, for instance), wherein the reflective electrode (7) has a flexural surface (column 7, lines 60-67; column 8, lines 1-11). Claims 9 and 13 are therefore unpatentable.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs
7/6/2006


ANDREW SCHECHTER
PRIMARY EXAMINER